

Remarks

The Applicant has amended the Specification and the Abstract to place them into better form for examination on the merits and allowance. The Applicants have cancelled Claims 1 – 8 and replaced them with new Claims 9 – 19. They are in better form for examination on the merits and allowance.

Passage to the appropriate art unit for examination on the merits is respectfully requested.

Respectfully submitted,



T. Daniel Christenbury
Reg. No. 31,750
Attorney for Applicant

TDC:lh
(215) 656-3381

SUBSTITUTE SPECIFICATION (Marked-Up)**A METHOD OF AND SYSTEM FOR ACCESSING AN INTERACTIVE TELEVISION
SESSION BY MEANS OF A MINI-MESSAGE****Related Application**

[0001] This is a §371 of International Application No. PCT/FR2004/050675, with an international filing date of December 10, 2004 (WO 2005/062613 A1, published July 7, 2005), which is based on French Patent Application No. 03/51107, filed December 18, 2003.

Technical Field

[0002] ~~The invention~~ This disclosure relates to the field of interactive television.

[0003] ~~The invention relates more specifically to a method that aims to allow access to an interactive television service by previously entering a code sent by mini message, which can be, for example, in SMS format.~~

Background

[0004] There are known solutions for accessing interactive pay television services in the previous state of the art. A classic solution consists of making the payment using a bank card. Other solutions are also known, such as payment by means of a surcharged modem connection.

[0005] ~~The invention intends to solve the disadvantages of the previous state of the art by providing a method that enables access to an interactive pay television service by means of a mini message.~~

Summary

[0006] ~~For this purpose, the invention relates, in its most general sense,~~This disclosure is directed to a method of accessing an interactive television service ~~by means of~~with a code and a mini-message, ~~characterised in that it comprises the following steps~~comprising:

[[-]] ~~randomly generation of~~generating a code C1 by an interactive television application implemented on an interactive television set;

[[-]] ~~sending of a~~ mini-message containing the code C1 to a processing server ~~by means of~~with a mobile telecommunications device;

[[-]] ~~calculation of the~~calculating a code $C2 = F(C1)$ ~~by~~with the processing server;

[[-]] ~~resending of the code C2 by~~with the processing server and ~~receipt of~~receiving the code C2 on the mobile telecommunications device;

[[-]] ~~entry of~~entering the code C2 by the user in the interactive television application;

[[-]] ~~calculation by~~calculating the interactive application ~~of~~ $C1' = F^{-1}(C2)$ [[,]];

checking that $C1' = C1$ [[,]]; and

enabling the user to access ~~said~~the service[[;]].

wherein F is a predefined function, and F^{-1} is the inverse function of F.

[0007] ~~According to a first variant, said~~The mini-message is~~may be~~ in SMS format[[.]].

[0008] ~~According to a second variant, said mini message is in~~MMS format[[.]] or

[0009] ~~According to a third variant, said mini message is in the form of an e-mail.~~

[00010] ~~According to an embodiment of the invention, said~~The mini-message is~~may be~~ transmitted across a mobile telecommunications network[[.]] or

[0010] ~~According to another embodiment of the invention, said mini message is transmitted~~ across the internet and/or a local wireless network.

[0011] Preferably, ~~said~~the service requires payment and ~~said~~the mini-message is surcharged.

[0012] ~~The invention further relates to a~~A system for implementing the method, ~~comprising~~
is also disclosed and comprises at least a mobile telecommunications device, an interactive television set, a mobile telecommunications network or a local wireless network, a digital television broadcasting network and a processing server.

Brief Description of the Drawing

[0013] The ~~invention~~disclosure will be understood better from reading the description, provided below for purely explanatory purposes, of ~~an embodiment of the invention~~,selected aspects in reference to the appended figure[[s]], in which:

- ~~figure~~Fig. 1 shows ~~an~~one selected embodiment of the method according to the invention.

Detailed Description

[0014] In the ~~embodiment of the invention shown in our~~selected example, a user has a television set connected to an interactive television decoder and a mobile telephone terminal that has capacity for sending and receiving SMS, MMS or e-mail messages. This terminal can be compatible with GSM, CDMA, GPRS, UMTS or any other digital telecommunications standard that supports sending and receiving mini-messages. It is also possible to use a PDA terminal (personal digital assistant) connected to a local wireless network (~~Wi-Fi, etc. or the like~~). It is understood that this example is non-exhaustive and that it is up to the person skilled in the ~~trade~~art to implement variations that adapt to each specific case.

[0015] The user ~~is~~may ~~watching~~ free-access interactive television programmes. At a given instant T, he/she decides to access an interactive pay television service. The interactive television application ~~implementing the method according to the invention~~ generates a code C at random and asks the user to enter this code C on his/her mobile terminal.

[0016] In ~~our~~the example, the code is taken from the natural numbers under $2^8 = 256$ and the function used is $Y = F(X) = 1/x^2$. This means that $X = F^{-1}(Y) = 1/\sqrt{Y}$.

[0017] The user then enters the code $C = N_1$ on his/her terminal and sends it in the form of an SMS message to a predefined number. In ~~our~~the example, the SMS is surcharged, in other words, the mobile telecommunications operator bills the message at a higher price than normal SMS messages and a part of this extra charge is paid back to the interactive pay television service provider.

[0018] Next, the SMS is received by a processing server, which calculates $R = F(N_1) = 1/(N_1)^2$. The server sends the result R back to the user's terminal over a mobile telecommunications network.

[0019] The next step ~~consists of~~comprises the user entering R in a window of the interactive television application using his/her remote control. The interactive application calculates $F^{-1}(R) = 1/\sqrt{R}$ and checks that this value is the same, by approximation of calculations on real numbers by nearby computers, as N_1 . If the verification is successful, the interactive television application ~~authorises~~authorizes the user to access the paying service.

[0020] The ~~invention~~above method and apparatus/system is described ~~above~~merely as ~~an~~ selected example. It is understood that ~~people~~those skilled in the ~~trade~~art will be able to implement different variants ~~of the invention~~ without therefore departing from the ~~context of the~~ patent spirit and scope of the appended claims.